Building Blocks of Knowledge

- In depot against driver station
 - Accessible by either alliance
- Robots deliver through Keyhole for HPs to place in Cache or Grid
- <u>86</u> Total BBoK
 - <u>43</u> Grey, <u>43</u> Brown

Nuggets of Knowledge

- Distributed to field by <u>HPs at Drop Station</u>, from Source
 - Alliance-specific Nugget Drop Zones, indicated by colored tape;
- Shoot into pillars
- <u>340</u> Total Nuggets

Source of STEM Knowledge

- Located at Nugget Drop station
- Holds <u>170</u> Nuggets to be distributed

Pillars of Knowledge

- Shoot Nuggets through high and low ports to score; equipped with smart scoring
 - Due to Pillars' movement, robots <u>cannot</u> score during Autonomous
 - <u>Connect</u> Pillar to Keystone by <u>pushing in 3ft</u> via linear slides
- Smart-scoring features:
 - Measures Nuggets by weight; scale in their bases
 - Visual feedback:
 - Rim lights: Indicate connections to Keystone
 - Side row of lights: Indicates <u>levels</u> (1 level = 10 Nuggets/1.14 lbs.)
 - Total of 8 levels

Ramp

- 2 Ramps: Both centered on field, against field wall

Grid - Connect-4-style grid

- In <u>Keystone</u>; on sides <u>facing audience</u>
 - Blocks are released once <u>bar on underside</u> is removed
- HPs *cannot* see their pattern a <u>wall obstructs their view</u>
 - Audience side is plexiglass, making Runes visible

Runes

- Pattern inside Keystone's <u>Grid</u>; created using <u>BBoK</u>
- Symbols of STEM; S-Beaker; T-Circuit; E-Gear; M-Math Signs

See Game Overview for Images

- <u>8 Runes</u>; Original for each letter in STEM (4) then an <u>inverse</u> of original symbols (+4)
 - Teams choose to create the <u>original</u> or its <u>inverse</u>
- <u>HP</u> create runes by dropping <u>BBoK</u> into cutouts in top of Grid
- 5 block x 5 block pattern
- Randomized by 2 coin flips prior to match

Capstone

- Can <u>only</u> move during <u>Endgame</u>
- Slides on top pillars

Keystone

- Walls around Center arena <u>7ft</u> high plexiglass
- Divided centrally-vertically for alliances
- Hole for Blocks of Knowledge called "Keyhole"